

**S-BAND  
TR TUBE****Service Type CV9442**

The data should be read in conjunction with the Duplexer Device Preamble.

**DESCRIPTION**

Broad-band single primer TR tube.

**CHARACTERISTICS**

Frequency range . . . . .	2925 to 3075	MHz
V.S.W.R. (see note 1) . . . . .	1.33:1	max
Maximum leakage:		
spike energy (see note 2) . . . . .	25	nJ/pulse
total power (see note 2) . . . . .	100	mW
low power . . . . .	500	mW
Recovery period to -3db (see note 2) . . . . .	25	µs max
Insertion loss (see note 3) . . . . .	1.0	db max
Arc loss (see note 2) . . . . .	0.8	db max
Position of short circuit (see notes 2 and 4) . . . . .	0.062 inch (1.6mm)	nom

**MAXIMUM AND MINIMUM RATINGS**

	Min	Max	
Transmitter power (peak) . . . . .	—	1250	kW
Primer supply voltage (negative) (see note 5) . . . . .	900	1100	V
Primer current . . . . .	70	150	µA
Waveguide pressure . . . . .	—	300	kN/m <sup>2</sup>
		44	lb/in <sup>2</sup>
Ambient temperature (non-operating) . . . . .	-40	+100	°C

**GENERAL**

Overall dimensions . . . . .	4.470 x 4.760 x 3.880 inches nom
	113.5 x 120.9 x 98.55mm nom
Waveguide size . . . . .	no. 10 (2.840 x 1.340 inches internal)
Coupler . . . . .	NATO S.N. 5985-99-083-0058
Finish . . . . .	flange faces tin or silver plated
Mounting position . . . . .	any
Net weight . . . . .	4¼ pounds (1.9kg) approx

## NOTES

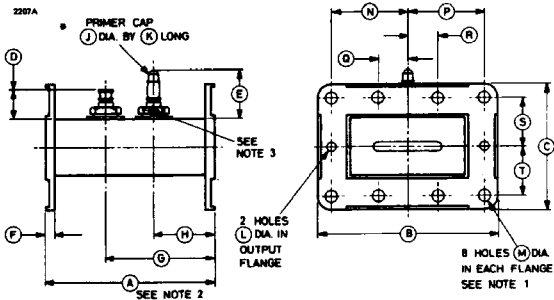
1. Measured at a power level below 10mW over the frequency range on a matched T junction.
2. Measured at 1.0MW peak power 1.0 $\mu$ s pulse length and 500p.p.s.
3. Measured at a power level below 10mW at the centre of the frequency range.
4. Distance of the effective r.f. short circuit behind front flange.
5. The primer supply voltage must be applied at least 5 seconds before the tube is required to operate. The primer current must be limited by a series resistance of 5.5M $\Omega$ , of which at least 0.5M $\Omega$  must be adjacent to the primer terminal.

## Outline Dimensions (All dimensions without limits are nominal)

Ref	Inches	Millimetres	Ref	Inches	Millimetres
A	4.470	113.5	L	0.250 + 0.002 - 0.000	6.350 + 0.051 - 0.000
B	4.760 $\pm$ 0.010	120.9 $\pm$ 0.25	M	0.260 $\pm$ 0.004	6.6 $\pm$ 0.1
C	3.260 $\pm$ 0.010	82.80 $\pm$ 0.25	N	2.031	51.59
D	0.875 max	22.23 max	P	2.031	51.59
E	1.250 $\pm$ 0.125	31.75 $\pm$ 3.18	Q	0.750	19.05
F	0.250 min	6.35 min	R	0.750	19.05
G	3.062 $\pm$ 0.062	77.77 $\pm$ 1.57	S	1.281	32.54
H	1.500 $\pm$ 0.062	38.10 $\pm$ 1.57	T	1.281	32.54
J	0.250	6.35			
K	0.250	6.35			

Millimetre dimensions have been derived from inches except dimension M.

## OUTLINE



### Outline Notes

1. The corresponding holes of both flanges are in alignment within 0.020 inch (0.51mm).
2. The two flange faces are flat and parallel within 0.005 inch (0.13mm). The flanges mate with coupler NATO S.N. 5985-99-083-0058.
3. Hole each side, 3.8mm diameter, to accept primer cap spring.